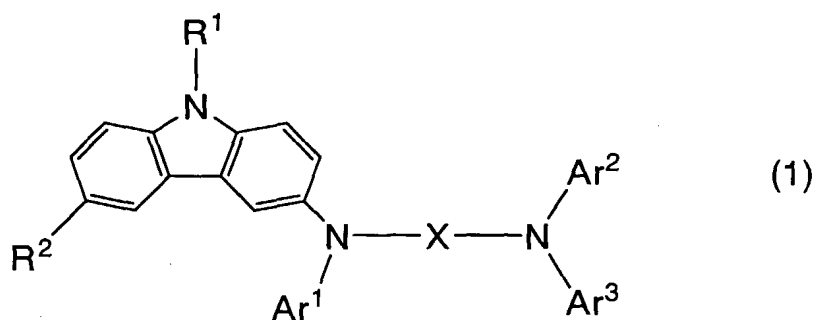


CLAIMS

1. A light emitting element comprising:

a plurality of layers between a pair of electrodes,

5 wherein one of the layers contains a carbazole derivative represented by a general formula (1) and an inorganic compound exhibiting an electron accepting property with respect to the carbazole derivative represented by the general formula (1):

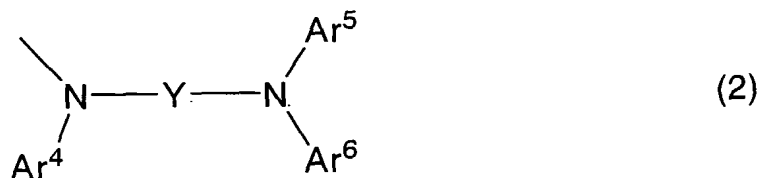


10 wherein R¹ represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms,

wherein R² represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a general formula (2),

15 wherein Ar¹ to Ar⁶ may be identical to or different from one another and independently represent either an aryl group having 6 to 25 carbon atoms or a heteroaryl group having 5 to 9 carbon atoms, and

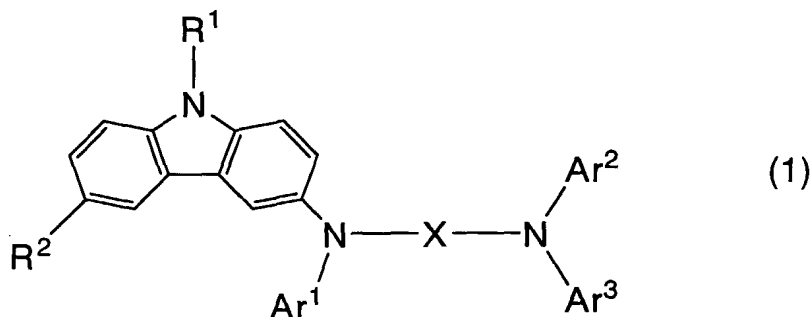
wherein X and Y may be identical to or different from each other and independently represent either a bivalent aromatic hydrocarbon group having 6 to 25 carbon atoms or a bivalent heterocyclic ring group having 5 to 10 carbon atoms.



2. A light emitting element comprising:

a plurality of layers between a pair of electrodes,

5 wherein one of the layers being in contact with one of the electrodes contains a carbazole derivative represented by a general formula (1) and an inorganic compound exhibiting an electron accepting property with respect to the carbazole derivative represented by the general formula (1):



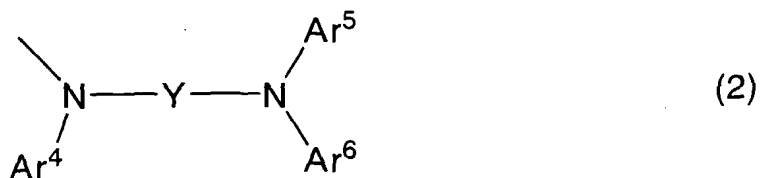
10 wherein R¹ represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms,

wherein R² represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a general formula (2),

15 wherein Ar¹ to Ar⁶ may be identical to or different from one another and
independently represent either an aryl group having 6 to 25 carbon atoms or a heteroaryl
group having 5 to 9 carbon atoms, and

wherein X and Y may be identical to or different from each other and independently represent either a bivalent aromatic hydrocarbon group having 6 to 25

carbon atoms or a bivalent heterocyclic ring group having 5 to 10 carbon atoms.



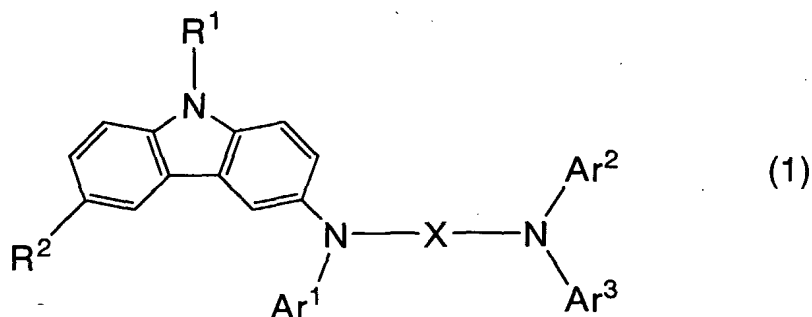
3. A light emitting element comprising:

5 a first layer, a second layer on the first layer, a third layer on the second layer and
a fourth layer on the third layer, between a pair of electrodes,

wherein the second layer contains a light emitting substance,

wherein the third layer contains a material having a donor level that can generate an electron, and

10 wherein each of the first layer and the fourth layer contains a carbazole derivative represented by a general formula (1) and an inorganic compound exhibiting an electron accepting property with respect to the carbazole derivative represented by the general formula (1):

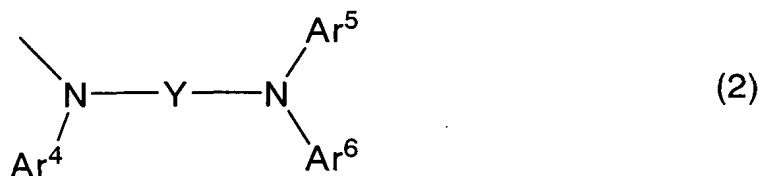


15 wherein R¹ represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms,

wherein R² represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a general formula (2),

wherein Ar¹ to Ar⁶ may be identical to or different from one another and independently represent either an aryl group having 6 to 25 carbon atoms or a heteroaryl group having 5 to 9 carbon atoms, and

wherein X and Y may be identical to or different from each other and independently
5 represent either a bivalent aromatic hydrocarbon group having 6 to 25 carbon atoms or a
bivalent heterocyclic ring group having 5 to 10 carbon atoms.



4. The light emitting element according to any one of claim 1 through claim 3,
10 wherein R¹ is any one of a methyl group, an ethyl group, a tert-butyl group, a phenyl group, a 4-biphenyl group and a 1-naphthyl group.

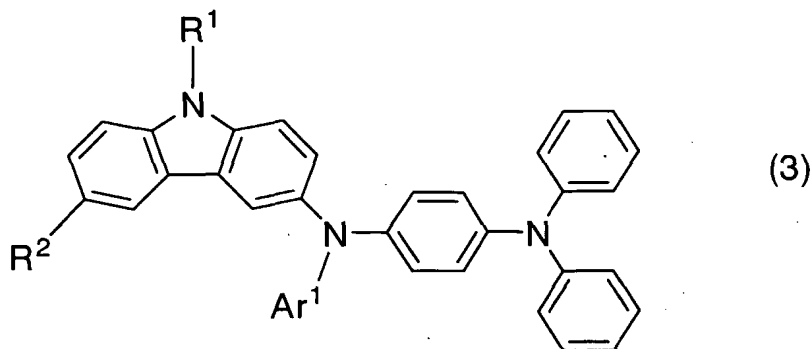
5. The light emitting element according to any one of claim 1 through claim 3,
wherein R² is hydrogen or a tert-butyl group.

15

6. The light emitting element according to any one of claim 1 through claim 3, wherein R^2 has a structure of the general formula (2) in which Ar^1 , Ar^2 , Ar^3 and X have the same substituents as Ar^4 , Ar^5 , Ar^6 and Y, respectively.

20 7. A light emitting element comprising:
a plurality of layers between a pair of electrodes,
wherein one of the layers contains a carbazole derivative represented by a
general formula (3) and an inorganic compound exhibiting an electron accepting property

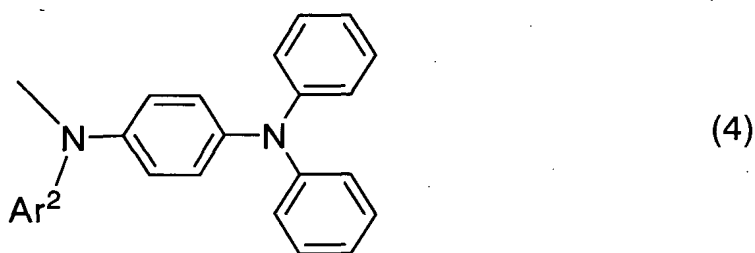
with respect to the carbazole derivative represented by the general formula (3):



wherein R^1 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms,

wherein R^2 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a general formula (4), and

wherein Ar^1 and Ar^2 may be identical to or different from each other and independently represent either an aryl group having 6 to 25 carbon atoms or a heteroaryl group having 5 to 9 carbon atoms.

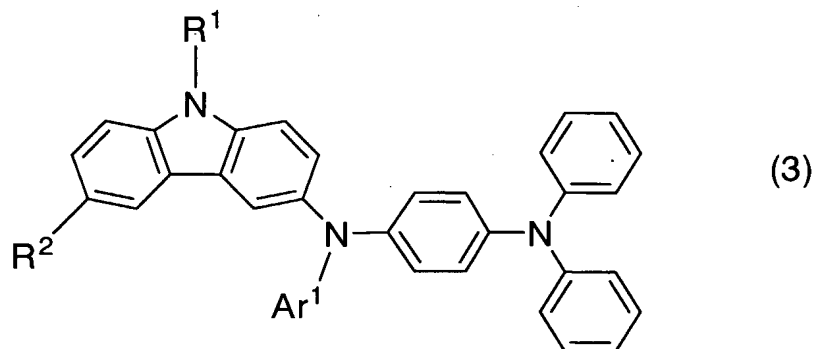


8. A light emitting element comprising:

a plurality of layers between a pair of electrodes,

wherein one of the layers being in contact with one of the electrodes contains a carbazole derivative represented by a general formula (3) and an inorganic compound exhibiting an electron accepting property with respect to the carbazole derivative

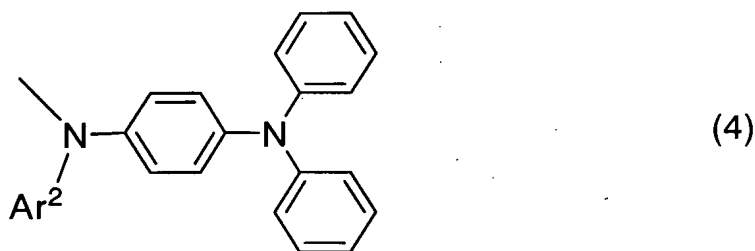
represented by the general formula (3):



wherein R¹ represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms,

wherein R² represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a general formula (4), and

wherein Ar¹ and Ar² may be identical to or different from each other and independently represent either an aryl group having 6 to 25 carbon atoms or a heteroaryl group having 5 to 9 carbon atoms.



9. A light emitting element comprising:

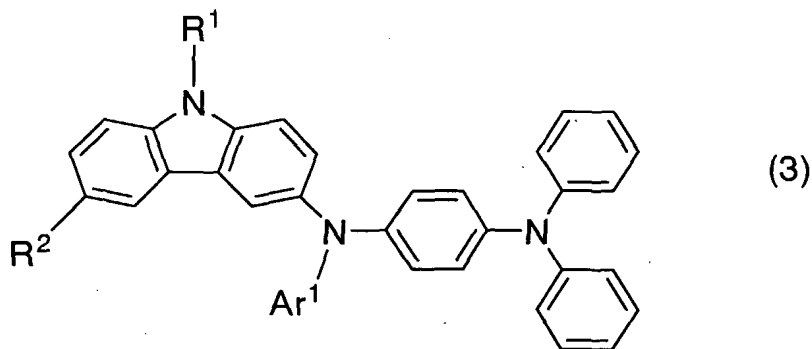
a first layer, a second layer on the first layer, a third layer on the second layer and a fourth layer on the third layer, between a pair of electrodes,

wherein the second layer contains a light emitting substance,

wherein the third layer contains a material having a donor level that can generate

an electron, and

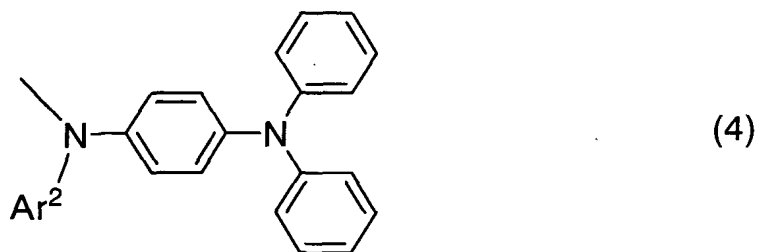
wherein each of the first layer and the fourth layer contains a carbazole derivative represented by a general formula (3) and an inorganic compound exhibiting an electron accepting property with respect to the carbazole derivative represented by the general formula (3):



wherein R^1 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms,

wherein R^2 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a general formula (4), and

wherein Ar^1 and Ar^2 may be identical to or different from each other and independently represent either an aryl group having 6 to 25 carbon atoms or a heteroaryl group having 5 to 9 carbon atoms.



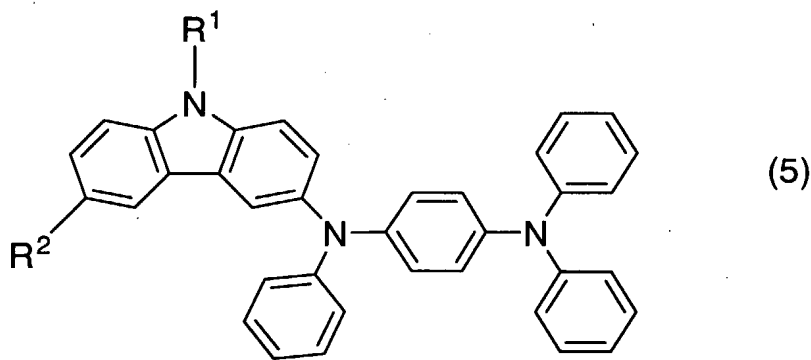
10. The light emitting element according to any one of claim 7 through claim 9,

wherein R^1 is any one of a methyl group, an ethyl group, a tert-butyl group, a phenyl group, a 4-biphenyl group and a 1-naphthyl group.

11. The light emitting element according to any one of claim 7 through claim 9,
5 wherein R^2 is either hydrogen or a tert-butyl group.

12. The light emitting element according to any one of claim 7 through claim 9,
wherein R^2 has a structure of the general formula (4) in which Ar^1 and Ar^2 have the same
substituent.

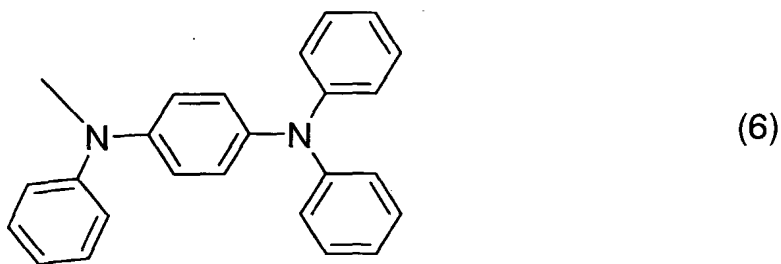
13. A light emitting element comprising:
a plurality of layers between a pair of electrodes,
wherein one of the layers contains a carbazole derivative represented by a
general formula (5) and an inorganic compound exhibiting an electron accepting property
15 with respect to the carbazole derivative represented by the general formula (5):



wherein R^1 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms, and

20 wherein R^2 represents any one of hydrogen, an alkyl group having 1 to 6 carbon

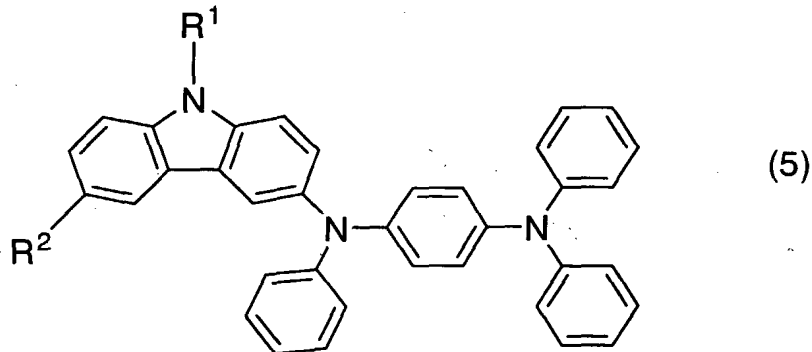
atoms and a substituent represented by a structural formula (6):



14. A light emitting element comprising:

5 a plurality of layers between a pair of electrodes,

wherein one of the layers being in contact with one of the electrodes contains a carbazole derivative represented by a general formula (5) and an inorganic compound exhibiting an electron accepting property with respect to the carbazole derivative represented by the general formula (5):

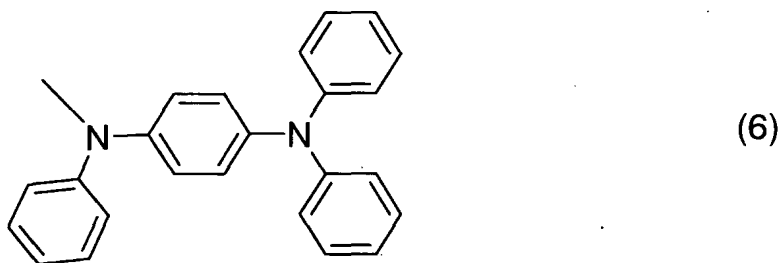


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wherein R¹ represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms, and

wherein R² represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a structural formula (6):

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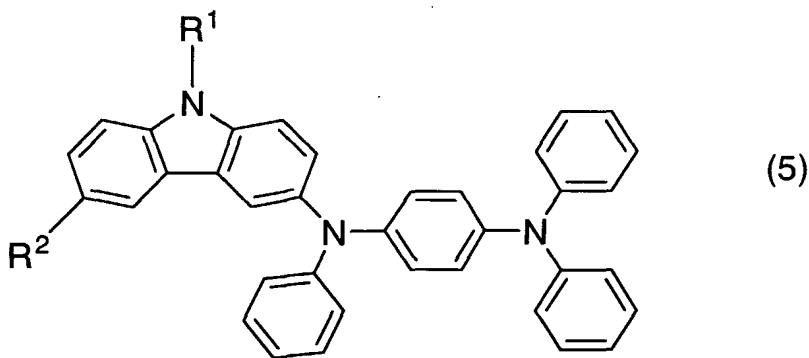
15. A light emitting element comprising:

a first layer, a second layer on the first layer, a third layer on the second layer and
5 a fourth layer on the third layer, between a pair of electrodes,

wherein the second layer contains a light emitting substance,

wherein the third layer contains a material having a donor level that can generate
an electron, and

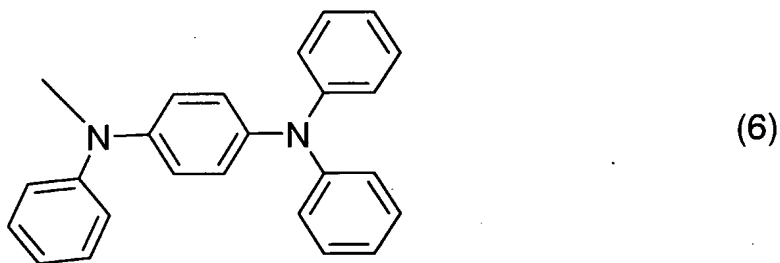
wherein each of the first layer and the fourth layer contains a carbazole
10 derivative represented by a general formula (5) and an inorganic compound exhibiting an
electron accepting property with respect to the carbazole derivative represented by the
general formula (5):



wherein R¹ represents any one of hydrogen, an alkyl group having 1 to 6 carbon
15 atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon
atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms, and

wherein R² represents any one of hydrogen, an alkyl group having 1 to 6 carbon

atoms and a substituent represented by a structural formula (6):



16. The light emitting element according to any one of claim 13 through claim
5 15, wherein R^1 is any one of a methyl group, an ethyl group, a tert-butyl group, a phenyl
group, a 4-biphenyl group and a 1-naphthyl group.

17. The light emitting element according to any one of claim 13 through claim
15, wherein R^2 is hydrogen or a tert-butyl group.

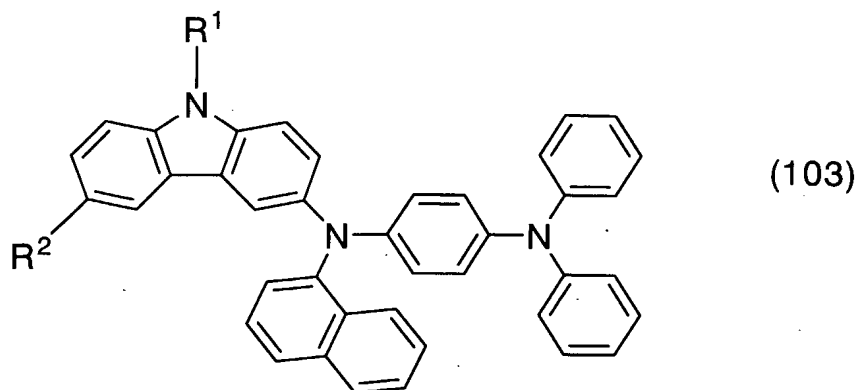
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18. The light emitting element according to any one of claim 13 through claim
15, wherein R^2 has a structure of the structural formula (6).

19. A light emitting element comprising:

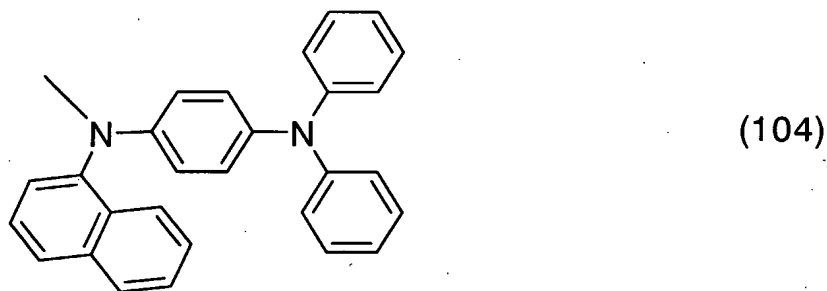
15 a plurality of layers between a pair of electrodes,

wherein one of the layers contains a carbazole derivative represented by a
general formula (103) and an inorganic compound exhibiting an electron accepting
property with respect to the carbazole derivative represented by the general formula
(103):



wherein R^1 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms, and

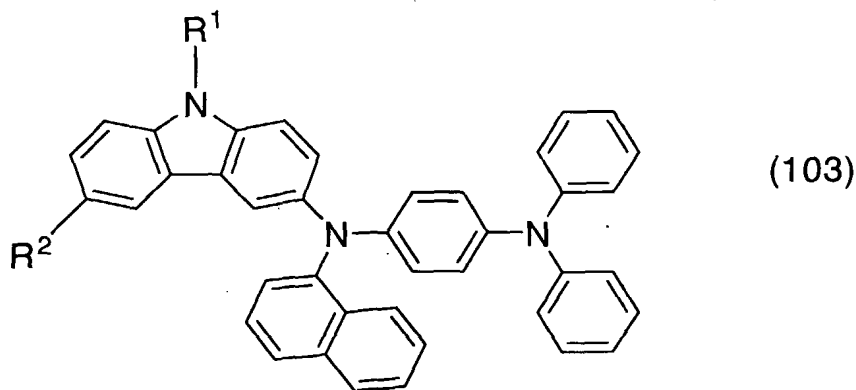
5 wherein R^2 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a structural formula (104):



20. A light emitting element comprising:

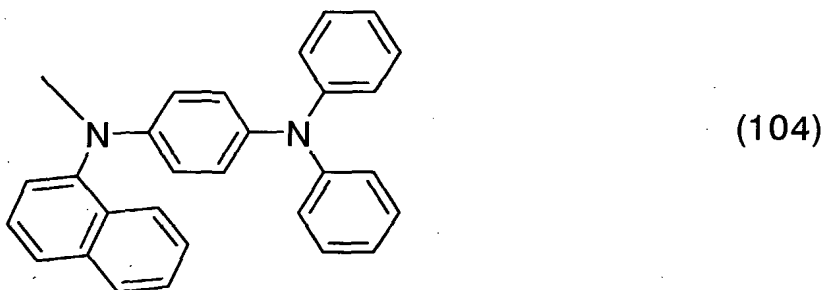
10 a plurality of layers between a pair of electrodes,

wherein one of the layers being in contact with one of the electrodes contains a carbazole derivative represented by a general formula (103) and an inorganic compound exhibiting an electron accepting property with respect to the carbazole derivative represented by the general formula (103):



wherein R^1 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms, and

5 wherein R^2 represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a structural formula (104):



21. A light emitting element comprising:

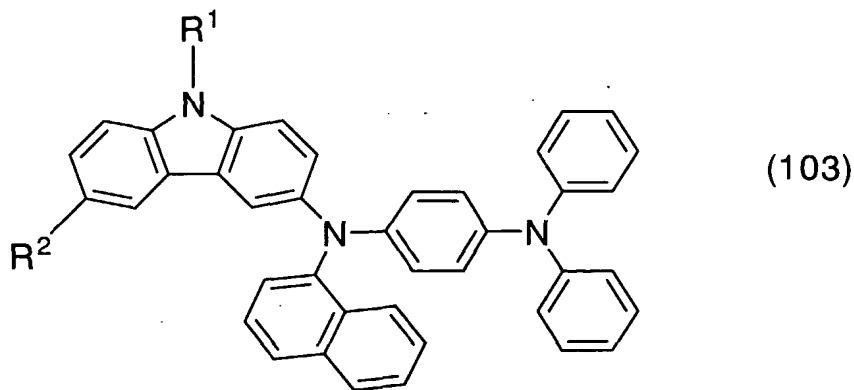
10 a first layer, a second layer on the first layer, a third layer on the second layer and a fourth layer on the third layer, between a pair of electrodes,

wherein the second layer contains a light emitting substance,

wherein the third layer contains a material having a donor level that can generate an electron, and

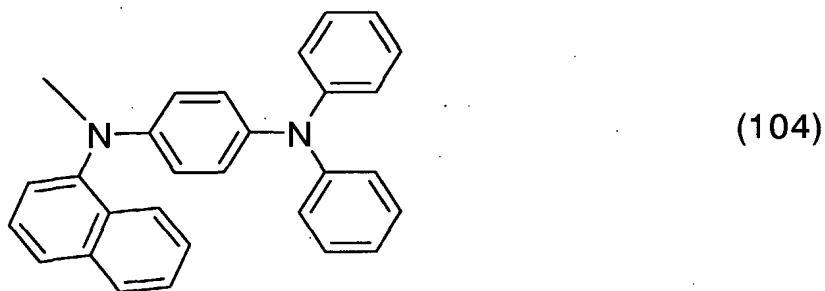
15 wherein each of the first layer and the fourth layer contains a carbazole derivative represented by a general formula (103) and an inorganic compound exhibiting

an electron accepting property with respect to the carbazole derivative represented by the general formula (103):



wherein R¹ represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 25 carbon atoms, a heteroaryl group having 5 to 9 carbon atoms, an arylalkyl group and an acyl group having 1 to 7 carbon atoms, and

wherein R² represents any one of hydrogen, an alkyl group having 1 to 6 carbon atoms and a substituent represented by a structural formula (104):



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22. The light emitting element according to any one of claim 19 through claim 21, wherein R¹ is any one of a methyl group, an ethyl group, a tert-butyl group, a phenyl group, a 4-biphenyl group and a 1-naphthyl group.

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23. The light emitting element according to any one of claim 19 through claim 21, wherein R² is either hydrogen or a tert-butyl group.

24. The light emitting element according to any one of claim 19 through claim 21, wherein R^2 has a structure of the structural formula (104).

5 25. The light emitting element according to any one of claims 1-3, 7-9, 13-15 and 19-21, wherein the inorganic compound is oxide of transition metal.

26. The light emitting element according to any one of claims 1-3, 7-9, 13-15 and 19-21, wherein the inorganic compound is one or more kinds of titanium oxide,
10 vanadium oxide, molybdenum oxide, tungsten oxide, rhenium oxide, ruthenium oxide, chromium oxide, zirconium oxide, hafnium oxide, tantalum oxide and silver oxide.

27. A light emitting device comprising a light emitting element according to any one of claims 1-3, 7-9, 13-15 and 19-21.

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